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ABSTRACT

Mismatch invisible underemployment is defined as a condition in which a person with a given level of education receives less than he/she should in terms of income and prestige. To examine the relationship between mismatch invisible underemployment and male competency and to determine the degree to which mismatch invisible underemployment affects a man's ability to function competently, employed black and white household heads (N=341) were interviewed as part of the 1981 Detroit Area Study. Results indicated that there was an inverse relationship between mismatch invisible underemployment and male competency as measured by self-efficacy. However, this relationship was only significant for whites but not for blacks. This finding suggests that this difference may have been due to the small sample size of blacks (N=48) compared to whites (N=290). (Author/JAC)

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Mismatch Invisible Underemployment and Male Competency

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TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

The purpose of the present research is to examine the relationship between mismatch invisible underemployment and male competency to determine the degree to which mismatch invisible underemployment affects a man's ability to function competently. Mismatch invisible underemployment is defined as a condition in which a person with a given level of education receives less than he should in terms of income and occupational prestige, given his level of education. Male competency is defined as a measure of how strong a man perceives his abilities are in relationship to aspects of general well-being. In this paper competency and efficacy will be used interchangeably.

Underemployment is a concept that has frustrated social scientists for many years. One reason is because greater difficulties are involved in the conceptualization and measurement of underemployment than of unemployment. Several researchers have noted that this need to measure underemployment has required techniques to operationalize the several categories of underemployment (Clogg,1979; Hauser and Sullivan,1975; Moore,1953; Bowen and Finegan,1969; Levitan and Taggart,1974 and Sullivan,1978). An international group of experts identified two major categories of underemployment: visible and invisible (United Nations,1973). The 1966 Resolution (See International Labour Office, 1976:7) defined the two principal forms of underemployment as follows:

> (1) visible underemployment is primarily a statistical concept directly measurable by labour force and other surveys, reflecting an insufficiency in the volume of employment. It occurs when a person is in employment of less than normal duration and is seeking or would accept, additional work.

(2) invisible underemployment is primarily an analytical concept reflecting a misallocation of labour resources or a fundamental imbalance as between labour and the other factors of production. Characteristic symptoms might be low income, underutilization of skill or low productivity.

Among the most definitive studies of underemployment is one conducted by Clogg (1979). Based on the labor utilization framework, Clogg(1979) described five forms of underemployment which pertained, with one exception, to persons who are members of the economically active work force. There were three measures of visible underemployment(i.e. sub-unemployment, unemployment and part-time unemployment) and two measures of invisible underemployment (low income and mismatch forms). This analysis will only focus on mismatch invisible underemployment.

It is important to study mismatch invisible underemployment because of the impact that it has on feelings of competency, especially with regards to black males. Several investigators have indicated that financial security is important to a sense of competence and that the man's earning power is a source of efficacy. For example, Cazenave (1979) study of black letter carriers in the New Orleans area clearly showed that the provider role is a very important component of the paternal role cluster for these men.

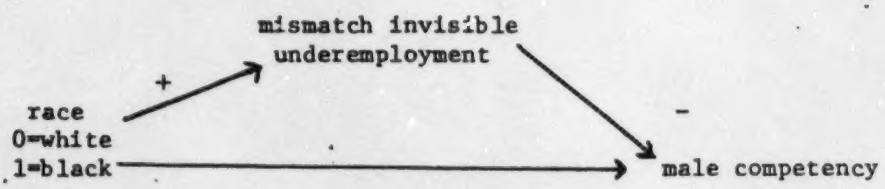
Taylor (1981) noted that the interplay of social and economic factors complicates the analysis of the black-white earnings gap. For instance, discrimination historically has played an important role in keeping black workers out of occupations which provide higher levels of earnings, skill training and job stability. Of critical importance, he stressed that access to both the quantity and quality of education differ for whites and blacks.

In our society, rightly or wrongly, the relationship between the male and female, even in the most intimate matters, is influenced by status. Males of high status are generally more desirable to females than males of lower status. In descriptive terms, a male who seeks a better job, makes more money and achieves a better education becomes more attractive to the female (Clark, 1967). It is noteworthy as pointed out by Clark (1967) that the position of the black male makes it difficult for the black female to respect him in terms of the standards which this society considers important--material possession, economic status, symbols of privilege, well furnished homes in good neighborhoods, fashionable clothing and private schooling. Such things, obviously, are less likely to be available to underemployed males. Therefore, being mismatched invisibly underemployed will affect a man's efficacy, especially in relationship to his status. Is a man's perception of his abilities in relationship to aspects of general well-being adversely affected by mismatch invisible underemployment? The following hypotheses will be tested to provide insight into this crucial question.

Hypotheses

It is hypothesized that mismatch invisible underemployment is associated with lower levels of competency than non-mismatch invisible underemployment. It is expected that the relationship between mismatch invisible underemployment and competency will be stronger for black men than for white men. This is expected because traditionally black men have been relegated to low status, low paying jobs. Consequently, their efficacy will be affected more because of their lower earning power and the lower prestige of their jobs. On the other hand, it can be argued that black men are "used" to being mismatched and have adjusted their expectations (i.e. work is not important to them). Thus, when white men are mismatched, they feel the effects (in terms of competency) more.

This research hopes to provide evidence to support the argument that although limitations have been imposed on black men by a society that has prevented their full participation in many areas of the socioeconomic sphere, they still have strong expectations in terms of aquiring the American dream. That is, despite the fact that black men may be "used" to being mismatched or may have adjusted their expectations to some extent, they never stop striving for success. Therefore, mismatch invisible underemployment will have a more adverse affect on their sense of efficacy than it does for white men. The following causal model guides this research:



Methodology

These hypotheses were tested using data collected in the 1981 Spring Detroit Area Study using a multi-stage probability sample. The population consists of adult males who were interviewed in the tri-county area of Wayne, Macomb and Oakland counties. The study has a 75.5% response rate (N=590). This analysis includes only black and white household heads who are currently employed full time (N=341).

A modified procedure from Clogg (1979) was used to create mismatch indices. Four different indices of mismatch invisible underemployment were constructed using the following variables: family income, respondent's income, Duncan Prestige Scores and Hodge Siegel-Rossi Prestige Scores (for exact question wording and scale construction see Appendix A). These independent variables are measures of mismatch invisible underemployment across five educational strata: grade school, some high school, high school graduate, some college and

college graduate. For example, mismatch by the respondent's income was constructed by taking the mean income within each educational strata and subtracting one-half of the standard deviation of each respective educational strata. If the respondent's income fell below one-half the standard deviation of the mean income of his educational level, then he is mismatch invisibly underemployed. If he does not conform to this pattern, then he is not mismatch invisibly underemployed. This index included 331 men. The same procedure was used in constructing the other mismatch invisible underemployment indices (mismatch by family income, N=330, mismatch by Duncan Prestigae Scores, N=341 and mismatch by Hodge-Siegel-Rossi Prestige Scores, N=339). All missing data was excluded from the analysis.

The mismatch index by respondent's income was included as an empirical measure because it is expected that if a respondent's personal income is low, it will affect his sense of efficacy. However, mismatch index by family income is also of theoretical relevance because it is speculated that if a man's earning power is not enough to provide for his family, then it will affect his sense of efficacy more than when it only involves himself. It is important to include mismatch index by prestige because the prestige of a job can have an impact on a man's sense of efficacy. That is, it is speculated that the prestige of a man's job could affect his sense of efficacy because if he believes that his job is important, he feels a sense of self-importance.

The dependent variable, male competency was measured by constructing a self-efficacy index using four items which measure some aspect of general well-being, which would indicate a man's sense of efficacy (for question wording see Appendix B). The five questions were summed to form an index with a range from 5 (among the worst on all items) to 25 (among the best on all items). Only cases which have five non-missing variable values were included (N=338).

Analysis of Data

The five mismatch indices and race were combined in a correlation matrix. An examination of Table 1 indicates that there is a clear inverse association between Duncan Prestige Scores mismatch index and Hodge-Siegel-Rossi Prestige Scores mismatch index and self-efficacy.

As expected, there is an inverse relationship between efficacy and mismatch index by family income and mismatch index by respondent's income. However, these relationships are not significant. This supports the idea that if a man considers his job to be important, it enhances his self-importance. However, it is surprising that mismatch indices by family income or respondent's income is not significantly related to self-efficacy. This indicates the possibility that being mismatched by income (family and respondent) do not affect a man's efficacy like or in the same manner that being mismatched by prestige. Since the correlation matrix does not reveal a significant relationship between efficacy and the mismatch indices by income (family and respondent), they are dropped from further analysis.[1] The mismatch index by Duncan Prestige Scores was significantly related (.01 level) to self-efficacy, therefore, it will be the focus of subsequent analyses. Originally, it was hypothesized that the relationship between mismatch invisible underemployment and male competency will be stronger for black men than for white men. Therefore, the relationship will be analyzed separately for blacks and whites using regression analysis.

Inspection of the data in Table 2, Equation 1 indicates that there is a strong inverse relationship between mismatch index by Duncan Prestige Scores and self-efficacy; the higher the mismatch by Duncan Prestige Scores, the lower the self-efficacy. However, only about two percent of the variance in self-efficacy is explained by mismatch by Duncan Prestige Scores. Equation 2 shows

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[1]Family income and respondent income were included in other analyses, but there were no significant results.

that there is not a significant relationship between race and self-efficacy and less than one percent of the variance in self-efficacy is explained by race. However, Equation 3 of this table shows that net of race, there still remains a strong inverse relationship between mismatch index by Duncan Prestige Scores and self-efficacy. Interestingly enough, this equation also shows that net of mismatch index by Duncan Prestige Scores, there is a significant positive relationship between race and self-efficacy. However, only three percent of the variance in self-efficacy is explained by mismatch index by Duncan Prestige Scores and race. Equally important, the significant relationship between race and self-efficacy should be taken cautiously, since the correlation matrix in Table 1 did not reveal a significant relationship between efficacy and race.

Table 3 provides the information needed to examine the second hypothesis that the relationship between mismatch invisible underemployment and self-efficacy will be more severe for blacks than for whites. The table reveals a strong negative relationship between mismatch index by Duncan Prestige Scores and self-efficacy for whites, but not for blacks. However, blacks have a slightly higher mean level of efficacy than whites (20.36 vs. 19.32 coefficients). This could be an artifact of the small black sample size. Moreover, the mismatch index by Duncan Prestige Scores coefficient for blacks is larger than the white coefficient (-1.13 vs. -.82). It is also interesting that the relationship is negative for both blacks and whites. It is speculated that the relationship is not significant for blacks because the sample size (N=48) is so small in comparison to whites (N=290).

Discussion and Conclusions

Two hypotheses relating mismatch invisible underemployment to male competency have been examined. There is little support for the hypothesis that

there is an inverse relationship between mismatch invisible underemployment and male competency as measured by self-efficacy. However, this relationship was significant for the mismatch indices for Duncan Prestige Scores and Hodge-Siegel-Rossi Prestige Scores but not for the mismatch indices for income (family or respondent). These results are important because they indicate that it is more damaging to a man's sense of efficacy to be mismatched by prestige than by income. It is possible that prestige satisfies a single set of needs, the ego needs for independence, achievement and power.

Of greater significance is the fact that the second hypothesis was not confirmed by the data. Instead the data revealed a strong negative relationship between mismatch index by Duncan Prestige Scores and self-efficacy for whites but not for blacks. However, the relationship is negative for both blacks and whites. The data seem to indicate that if the black sample size was larger, the relationship between mismatch index by Duncan Prestige Scores and self-efficacy would be significant.

Since the relationships are both negative, if the coefficients remained -.82 for whites and -1.13 for blacks (refer to Table 3), and the black sample size increased such that the -1.13 became significant, the second hypothesis that blacks "feel" the effects of mismatch more than whites would be supported. That is, an increase of one mismatch point would drive efficacy down 1.13 for blacks and only .82 for whites.

In the meantime, it will be cautiously noted that conclusive evidence that the relationship between the Duncan Prestige Scores mismatch index is more severe for blacks than for whites is lacking. The results clearly emphasize the need to conduct a similar analysis with a larger black sample. It was stated earlier, that the characteristic symptoms of invisible underemployment might be low income, underutilization of skill or low productivity.

A second study of mismatch invisible underemployment focused on underutilization of education will be conducted in which the black male sample will be taken from data collected in the summer 1979-fall 1981 National Survey of Black Americans. The study has a 67% response rate (N=2107). The purpose of the research is to determine how men respond to having jobs and/or income but especially jobs which are below what might be expected based on their education. Since education is being emphasized as the means of advancing in society, a study of this type is particularly timely at this juncture in our history. However, the literature that discusses it has not systematically included blacks because of insufficient data to make meaningful comparisons.

Specifically, this analysis will try to determine the effects that this underutilization has on personal control expectancy. Moreover, it will try to determine if men who have jobs and/or income (especially jobs) which are below what might be expected based on their education but make internal attributions are lower in personal control expectancy than those men who make external attributions. Underutilization of education is defined as a condition in which a person with a given level of education receives less than he should in terms of income and occupational prestige, given his level of education.

Personal control expectancy is the belief that one's own efforts and abilities produce a high probability that one will receive desirable results. An internal attribution represents a belief that rewards follow from or are contingent upon one's own behavior. An external attribution indicates a belief that rewards are controlled by forces outside oneself and thus, may occur independently of one's own activities.

It is important to study how males respond to having jobs and/or income (especially jobs) which are below what might be expected based on their education because it could be a potentially stressful situation. This is particularly

important in regards to black males, because often they are unable to obtain jobs appropriate for their education (McAdoo, 1978). More importantly, discrimination against blacks has consistently meant that employment status is determined more by race than educational attainment (McAdoo, 1978). Moreover, if men make internal attributions for the underutilization of education, it could have deleterious consequences for their mental health, especially black men because it is a more consistent labor market problem for them.

Most of the studies in the social psychological literature on reactions to outcomes that are stressful or unpleasant have been conducted in laboratory settings. This research will incorporate the status inconsistency and learned helplessness perspectives in its examination of males' reactions to having jobs and/or income (especially jobs) which are below what might be expected based on their education.

Table 1

Correlation Matrix for Variables in the Model
N = 328

1.	Efficacy	—					
2.	Mismatch by Family Income	-.04	—				
3.	Mismatch by Respondent's Income	-.01	.65**	—			
4.	Mismatch by Duncan Prestige Scores	-.14**	.31**	.32**	—		
5.	Mismatch by Hodge Prestige Scores	-.10*	.17**	.15**	.59**	—	
6.	Race	.09	.08	.14**	.19**	.15**	—
		1	2	3	4	5	6

*Significant at .05 level

**Significant at .01 level

Table 2

Regression Coefficients Predicting Self-efficacy

	Equation 1		Equation 2		Equation 3	
Variables	Coeff	St. Error	Coeff	St. Error	Coeff	St. Error
Constant	19.42**	.17	18.45**	.49	18.45**	.48
Mismatch Duncan Prestige Score	-.73**	.31	--	--	-.87**	.31
Race	--	--	.65	.41	.88*	.41
	R^2 = .02 N = 338		R^2 = .007 N = 338		R^2 = .03 N = 338	

**Significant at .01 level

*Significant at .05 level

Table 3

Regression Coefficients Predicting Self-efficacy by Race

	Whites		Blacks	
Variables	Coeff	St. Error	Coeff	St. Error
Constant	19.32**	.18	20.36**	.59
Mismatch by Duncan Prestige Score	-.82**	.34	-1.13	.81
	R^2 = .02 N = 290		R^2 = .04 N = 48	

**Significant at .01 level

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Appendix A

Question Wording for Variables Used in Analysis(mismatch invisible underemployment)

E 23. Approximately what was your total family income in 1980 before taxes, considering all sources such as wages, profits, interest, social security, welfare payments and so on from all family members combined?

E 24. About how much of the total family income was earned or received by you either from a job or some other source of income?

Prestige Score #1 Duncan Prestige Score

$$\text{Status of Occupation} \left[\frac{(i)=10\ Z\ E(i) + ZI(i)}{s(ZE + Z\ I)} \right] + 50$$

where $ZE(i) = \frac{\bar{X}\ E(i) - \bar{X}\ E}{S\ E}$ and $ZI(i) = \frac{\bar{X}I(i) - \bar{X}\ I}{S\ I}$

where E= Education and I = income

Prestige Score #2 Hodge Score

Each occupational category was assigned a Hodge-Siegel-Rossi prestige score (1960). For each DAS occupational category, an average prestige score was calculated. For example, occupations in category 36 had the following scores:

Appendix A (continued)

mailmen 42

postal clerks 43

railway mail clerks 36

express messengers 36

ticket and station agents 35

mean n= 38 = prestige score #2

If a reasonable estimate of the distribution of occupations within each two-digit category could be made, weighted means were calculated. For example, occupations in category 4 had the following scores:

School teachers 63

Librarians 55

Social workers 52

Since we know that the vast majority of the respondents were teachers, the category was assigned score of 62.

Appendix B

Question Wording for Variables Used in Analysis (self-efficacy)

F7. Compared to other men, how would you rank yourself on the following characteristics? Would you say you are among the best, above average, average, below average or among the worst? The first is:

	Among Best	Above Avg.	Avg.	Below Avg.	Among Worst	
a) self confidence	5	4	3	2	1	(rescored)

b)ability to build or repair things (was omitted)

c)control over the direction your life is taking

d) closeness to family

e) physical health and well being

f) what you have managed to achieve in life so far